

539,342

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 July 2004 (08.07.2004)

PCT

(10) International Publication Number
WO 2004/056482 A1

(51) International Patent Classification⁷: **B01J 31/22**,
31/34, C07F 17/00, C08F 10/00

(21) International Application Number:
PCT/EP2003/014447

(22) International Filing Date:
18 December 2003 (18.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
102 61 109.2 20 December 2002 (20.12.2002) DE
60/490,303 25 July 2003 (25.07.2003) US

(71) Applicant (for all designated States except US): **BASELL
POLYOLEFINE GMBH** [DE/DE]; Brühler Strasse 60,
50389 Wesseling (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MIHAN, Shahram**
[IR/DE]; Rossinistr. 12, 67061 Ludwigshafen (DE). **NI-
FANTE'EV, ILYA** [RU/RU]; 26 Bakinskikh Komissarov St.,
Appt. 60, 12/3, 117526 Moscow (RU).

(74) Agent: **BASELL POLYOLEFINE GMBH**; Intellectual
Property - F 206, Carl-Bosch-Str. 38, 67056 Ludwigshafen
(DE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: MONOCYCLOPENTADIENYL COMPLEXES

(57) Abstract: Monocyclopentadienyl complexes in which the cyclopentadienyl system bears at least one unsubstituted, substituted or fused, heteroaromatic ring system bound via a specific bridge, a catalyst system comprising at least one of the monocyclopentadienyl complexes, the use of the catalyst system for the polymerization or copolymerization of olefins and a process for preparing polyolefins by polymerization or copolymerization of olefins in the presence of the catalyst system and polymers obtainable in this way.



WO 2004/056482 A1